

Application No.: 10/562,792

REMARKS

I. Introduction

In response to the April 24, 2008 Office Action, Applicants have incorporated the limitations of claim 2 into independent claim 1. Claim 2 has been cancelled, without prejudice. Claim 8 has been amended to overcome the objections. Applicants have amended the Title to more clearly describe the invention to which the claims are directed. No new matter has been added.

For the reasons set forth below, Applicants respectfully submit that all pending claims are patentable over the cited prior art references.

II. The Rejection Of Claims 1-3, 5 And 6 Under 35 U.S.C. § 102

Claims 1-3, 5 and 6 are rejected under 35 U.S.C. § 102(b) as being anticipated by Dobson et al. (USP No. 6,265,823). Applicants respectfully submit that Dobson fails to anticipate the pending claims for at least the following reasons.

With regard to the present invention, amended claim 1 recites, in-part, a phosphor element comprising: a pair of electrodes facing each other; and a phosphor layer interposed between the pair of electrodes and including a semi-conductive phosphor fine particle in which at least a part of a surface is covered with a conductive organic material, wherein the conductive organic material is chemically adsorbed on the surface of the semi-conductive phosphor fine particle.

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It is alleged that Dobson teaches that poly-n-vinylcarbazole (PVK) is a conductive organic material chemically adsorbed on the surface of the semi-conductive phosphor fine particle. Applicants respectfully disagree.

It is noted that PVK does not include a primary amino functional group. Rather, as is well known, PVK contains a tertiary amino group as part of the chemical structure, which forms the connection between the pendant substituent and the polymer chain backbone. As is well known, tertiary amino compounds with bulky substituents prevent the adsorption of the amine group onto the surface of particles. Accordingly, Dobson does not disclose a phosphor element in which the conductive organic material is chemically adsorbed on the surface of the semi-conductive phosphor fine particle.

As the Examiner is aware, anticipation under 35 U.S.C. § 102 requires that each element of the claim in issue be found, either expressly described or under principles of inherency, in a single prior art reference, *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 218 USPQ 781 (Fed. Cir. 1983). As Dobson, at a minimum, fails to disclose a phosphor element comprising: a pair of electrodes facing each other; and a phosphor layer interposed between the pair of electrodes and including a semi-conductive phosphor fine particle in which at least a part of a surface is covered with a conductive organic material, wherein the conductive organic material is chemically adsorbed on the surface of the semi-conductive phosphor fine particle, it is clear that Dobson fails to anticipate amended claim 1. Therefore, it is respectfully requested that the rejection of claim 1 under § 102 be withdrawn.

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III. The Rejection Of Claims 7 And 8 Under 35 U.S.C. § 103

Claims 7 and 8 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Dobson in view of Hseuh et al. (USP No. 5,587,329). Applicants respectfully traverse these rejections for at least the following reasons.

With regard to the present invention, amended claim 8 recites, in-part, display device comprising: a luminescent array in which phosphor elements are arranged in a plane, wherein the phosphor element comprises: a pair of electrodes facing each other; a phosphor layer interposed between the pair of electrodes and including a semi-conductive phosphor fine particle in which at least a part of a surface is covered with a conductive organic material.

It is alleged that Dobson discloses a semi-conductive phosphor fine particle in which at least a part of a surface is covered with a conductive organic material, such as PPV and PVK. However, Dobson fails to disclose that the phosphor elements are arranged in a plane. The recited passage appears silent with regard to this limitation. Furthermore, Hseuh does not appear to remedy this deficiency. Accordingly, Dobson, alone or in combination with Hseuh, fails to teach or disclose all of the limitations of claim 8.

In order to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 180 USPQ 580 (CCPA1974). As Dobson and Hseuh, at a minimum, fail to describe a display device comprising: a luminescent array in which phosphor elements are arranged in a plane, wherein the phosphor element comprises: a pair of electrodes facing each other; a phosphor layer interposed between the pair of electrodes and including a semi-conductive phosphor fine particle in which at least a part of a surface is covered with a conductive organic material, it is submitted that Dobson

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and Hseuh, alone or in combination, do not render claim 8 obvious. Accordingly, it is respectfully requested that the § 103 rejection of claim 8, and any pending claims dependent thereon be withdrawn.

IV. All Dependent Claims Are Allowable Because The Independent Claim From Which They Depend Is Allowable

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claims 1 and 8 are patentable for the reasons set forth above, it is respectfully submitted that all pending dependent claims are also in condition for allowance.

V. Conclusion

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication of which is respectfully solicited.

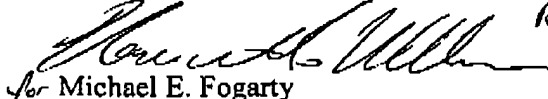
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To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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